

MARINE REVIEW.

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Prominent Men of the Lakes.

A lawyer who sits as a court in deciding disputed questions among his clients is one of the wonders of the Chicago bar. In his office more disputes are ended than find their way into the United States courts. The decisions and opinions of this lawyer are never doubted for their fairness and good judgment, and are accepted as the law and the facts. The proctor in admiralty who takes so important a part in Chicago's marine interests is Mr. Charles E. Kremer. Mr. Kremer did not drift into an admiralty practice. He came up in it. His tastes were for the marine from a boy, and if his guiding star had not turned him towards the practice of law, doubtless he would have been standing on the bridge of some big lake steamer these days.

Mr. Kremer was born in Oshkosh, Wis., forty-one years ago. His first active service in life was teaching school. In 1870 he removed with his people to Milwaukee. He attended a business college awhile and then tried mercantile pursuits, but they were not to his fancy. He saw he was not well built for business. He then entered the law office of H. H. & G. C.

Mr. Kremer has been found fighting for all there was in it on one side or the other. In the galaxy of marine lawyers he holds an important place. He is a growing man, too, and in the many years yet allotted to him by the prophet, he is destined to fill an honorable position as one of the great authorities of marine law in this country. Personally Mr. Kremer is a most agreeable companion. He has in a high degree that rare faculty of remembering a good story just at the right time, and as a teller of stories he has no second in the Chicago marine. He is especially interesting in a character sketch, his remarkable facility of personating coming into good play. Nothing stirs up Mr. Kremer more than a tale of the oppression of the poor by the powerful. He has taken hundreds of cases where all the fee he could expect was the reward he felt in his heart at having stopped or righted a wrong done to those who were considered too weak to resist. He has been most truly the "sailors' friend."

Mr. Kremer resides in a pleasant home on Ashland avenue, the West Side's finest street. His home with all comforts to be desired, is one of the most attractive houses on that thorough-



CHARLES E. KREMER.

Markham, and began the study of law. Taking naturally to admiralty, he gave to it his most enthusiastic attention. In 1874 he was admitted to the bar, and the year following he hung up his shingle as an attorney of law on the Chicago lumber market. Being energetic and quite able, he developed a remarkable faculty for seeing both sides of a question and of pointing out how a fair settlement could be reached and litigation averted. He became, in fact, the peacemaker of the market. In the five years his office was on South Water street, his practice had grown to very respectable proportions. He was recognized as one of the rising young attorneys of the Chicago bar. In 1880, when George Gardner, one of the prominent admiralty lawyers of Chicago, was elected judge of the superior court, Mr. Kremer succeeded him in the firm of Gardner & Schuyler, the firm name becoming Schuyler & Kremer. There Mr. Kremer is yet, and there he is likely to remain. He has become the attorney of all the tug companies, of all the propeller lines except one, of the general insurance agents, and of two-thirds of the vessel owners of Chicago. Thus it has happened that he so frequently sits as a judge or referee in disputes between his clients.

In all the great admiralty cases of the lakes in recent years

fare. He has accumulated considerable real estate and is secretary of the Libby Prison Association, an enterprise he has been identified with from its beginning. He has studiously avoided politics and hopes that he may never fall from grace in that regard.

Millionaires' Yachts.

It will cost at least \$15,000 a year to run either of the steel steam yachts now building in Cleveland for Mr. J. H. Wade, Jr., and Mr. H. M. Hanna. Pleasure craft of this kind are an expensive luxury even at a first cost of about \$100,000, but individual wealth in the west compares favorably with that of New York and other eastern cities and it is certain that the demand for elegant steam yachts on the lakes will increase in the future. Detroit, with its grand stretch of river, already has more steam yachts than any city in the country. The Herreshoffs build most of the steam yachts in use on the Atlantic coast, and they have recently turned to designing sailing craft. They have on the stocks now two steel steam yachts, one for W. R. Hearst, son of the California millionaire, and the other for E. D. Morgan, of New York. Mr. Hearst's yacht is 112 feet over all and is to make 25 miles an hour. A speed of 23 miles an hour is guaranteed for the Morgan yacht.

Low Cost of Lake Transportation.

The Sault Ste. Marie canal officers are about to publish the results obtained from a discussion of the business of the canal during 1890, and it will be shown that the average cost per ton per mile on that part of lake freight that passed through the canal has again been reduced this time to 1.3 mills. Rates are steadily approaching the ocean figure which is estimated at 1 mill per ton per mile. Following are some comparisons gained through advance information regarding the report.

	Freight Ton- nage, net.	Valuation of Fr't. ton'ge.	Average dist. car- ried, miles	Total cost, water Trans- portation.	Cost per ton per mile
1887	5,494,649	\$ 79,031,758	811.4	\$10,075,153	2.3 mills
1888	6,411,423	82,156,020	806.9	7,882,077	1.5 "
1889	7,516,022	83,732,527	790.4	8,634,246	1.5 "
1890	9,041,213	102,214,949	*707.2	9,472,214	1.3 "

* Mean 801.5.

The rates for different kinds of merchandise vary a great deal. In 1890 coal, which is an up freight, was carried for 0.5 mill per mile-ton, while miscellaneous merchandise cost 3.4 mills per mile-ton. Vessels made big profits in 1887 and this accounts for the high rates of freight.

The largest cargo passing the canal in 1890 was 3,021 tons, and was carried by one of the whaleback barges, No. 107.

The greatest number of mile-tons was reported by the steamship Northern Queen, one of the Great Northern railway boats.

The greatest aggregate number of tons carried through the canal by any vessel during the season was 77,124 tons by the steamship Manola, owned by the Minnesota Iron Company. This boat also reported the greatest number of miles run, viz: 49,201 miles. In addition she made one trip to Escanaba bringing her total season's run up to 50,580 miles in 223 days. It is believed that no boat ever before ran this distance in so short a time.

The total valuation of all vessels using the canal during the last four years is as follows:

1887	\$19,773,950
1888	21,895,400
1889	26,926,200
1890	29,635,500

This shows that about \$10,000,000 worth of vessel property has been added to the Lake Superior fleet within the past four years.

A Big Movement in Coal.

The coal shippers have certainly contributed their share to the general lake trade since the opening and they are getting fair prices for their product. Only a few cargoes of Pittsburgh bituminous coal have been sold below the established prices of \$2.25 and \$2.35, free aboard vessels, and this was to relieve cars that had accumulated on account of the rush of coal to lake ports previous to May 1. Buffalo's shipments of hard coal for May aggregated 356,410 tons against 230,880 tons last year, and the receipts at Chicago for last week alone were 179,500 tons. Buffalo's shipments from the opening to June 1 were 445,600 tons against 345,010 tons last year.

Receipts of one company at the head of Lake Superior, the Silver Creek & Morris, foot up 40,000 tons for May. This amount is nearly one-half of this company's entire receipts for last season. Whether this movement will hold out at remunerative rates against the light demand for vessels to carry down-bound freight is, of course, an important question, but the season is very late and it is certain that the demand for coal is great. The boats that have made trips down the lakes light for coal have not earned any money by such a proceeding but their owners figure that the wages of the captain and engineer who must be kept aboard after the boat is fitted out, together with insurance and other charges, foot up \$25 or \$30 a day on a big boat and this is reduced materially by carrying the coal. The boats owned by Wolf & Davidson, Milwaukee, have

made two trips to Buffalo for coal that pays 60 cents a ton and the H. D. Coffinberry and consort and John F. Eddy and consort did likewise after remaining some time at Milwaukee without being able to secure ore or grain.

A Whaleback in 1858.

Horace See, E. and N. A., of New York, writing about "Building the Steamship in America," in the Engineering Magazine, of New York, gives some attention to the McDougall barges, of lake fame, calling them a modification of a cigar steamer built in 1858. "The ease with which iron could be fashioned into almost any form," he says, "was taken advantage of by the numerous inventors to construct vessels of peculiar shape, even in the early days of its application to shipbuilding. Ross Winans, of Baltimore, the locomotive builder and constructor of railroads in Russia, conceived the idea that the parabolic spindle was the correct form to give a vessel to insure strength, speed and what not. Having a large fortune to assist him he, himself, built such a vessel in 1858 to test the truth of his theory. It was called the cigar steamer, on account of its shape closely resembling that of its namesake. It would have been quite natural to have propelled this vessel with a screw propeller placed at one end. Such a simple agent, however, was not employed, but a wheel resembling a turbine was fitted and made to revolve on the outside of the hull about midships. It was driven by engines of the locomotive type. This vessel had no keel or stem, and, as a natural consequence, failed on account of insufficient stability."

The writer also says that the first successful triple expansion engine fitted to a vessel in this country was in the yacht Peerless, built in 1885, by Cramp & Sons, and now hailing from Cleveland, being owned by the Harkness estate. This boat is 146 feet long, 22 feet beam and 13 feet depth of hold. The engine has cylinders 17, 24 and 40 inches diameter by 22 inches stroke of piston. There is one boiler with 70 square feet of grate, built to carry 170 pounds of steam. Forced draught in a close fire room enabled the boiler to generate sufficient steam to develop about 1,100 indicated horse-power, or very nearly 16 horse-power to each square foot of grate.

Greatest of Steamship Records.

There is probably no place on the globe where vessels and cargoes are handled with the dispatch attending the transportation of iron ore on the lakes. Attention is again called to this fact by the results obtained from a discussion of the business of the Sault Ste. Marie canal, published elsewhere, and by reference in Atlantic coast publications to the work of the Morgan Line steamship El Sol, trading between New York and New Orleans. This boat recently made the round voyage in 12 days, 12 hours and 40 minutes, steaming a distance of 3,502 miles and discharging and loading at New Orleans. This is pronounced unprecedented but it falls short of the lake records of a number of big steel ore carriers. The round trip distance from Two Harbors, Lake Superior, to Ashtabula on Lake Erie is 1,778 miles, but the boats of the Minnesota Steamship Company make the run, loading and unloading 2,300 gross tons of ore in 6 days, and this week after week for the whole season. When it is known that this immense cargo is put into the boats of this class in two to three hours and is taken out in six to ten hours, this wonderful service will be understood. The discussion of the canal traffic by government officials shows that the steamship Manola, the first of these boats to go into commission in 1890, covered 50,580 miles and delivered 77,125 tons of cargo during the season of 223 days. But the Minnesota boats are not the only flyers. Several big carriers in the Escanaba trade made thirty-two to thirty-six round trips of 1,178 miles each to Lake Erie. At 55 cents a ton, the prevailing rate on ore from Escanaba, this commodity is now carried 600 miles and delivered on dock from the vessel at a cost that is less than the railway freight from the mine to the shipping port, a distance in some cases of only 40 or 50 miles.

CHICAGO LAKE INTERESTS.

WESTERN OFFICE, MARINE REVIEW,
No. 210 So. Water Street, CHICAGO, ILL., June 4.

The shipbuilder who figures out first a movable cabin, the difficult problem in marine architecture, has a small fortune before him. Perhaps the best paying and most attractive traffic on the lakes, Lake Superior tourists, has been long neglected. Owing to the shortness of the season of the traffic, capital has not gone into the boats now imperatively demanded by the traveling public. Vessel owners have not seen their way to carry a cabin through the entire season of navigation, when it could be used for profit only between June 15 and Sept. 15. A prominent marine man speaking of this matter said today: "Two years ago, I proposed a plan by which passenger cabins could be placed on steamers in June, and be taken off early in September, leaving the boats unencumbered for carrying freight the rest of the season. I was laughed at, and was told that the scheme was impracticable. Last winter when in Buffalo Capt. Henry, of the Lehigh Valley line and myself fell to talking about steamers for Lake Superior business. I was surprised to find he had the same idea in mind that I had. He said it was possible to have a movable cabin so made that it could be placed on a steamer in two days and taken off in one day. He was very enthusiastic about it, and this gave me hope that my derided scheme was not entirely impracticable. I firmly believe that if the shipyards put men at work on this project they could find a way to place movable cabins on freight steamers at no great trouble. Why doesn't some one try it? If he succeeds he will make some good money."

The possibilities of the Lake Superior tourists' traffic are great, if fast modern steamers were in the service. The full capacity of the lines are now taxed to the utmost during the rush of July and August. There is plenty of business for fifteen or twenty big steel steamers during the two months now to be had, and no telling how much more if the traffic is pushed.

The press dispatches have told all there is known about the fate of the schooner Thomas Hume. Some people insist she was run down by some steamer, the crew left to their fate, and the facts carefully concealed. I may have too high an opinion of human nature, but I don't believe there is anything in this theory. Then I can't see how the knowledge of the crime could be kept secret. There's too much talk for that. The owners of the steamer would be at the mercy of the crew, and the ethics of blackmail know no limit. The night the Hume is supposed to have been lost Capt. Crawford says an ugly squall in the higher atmosphere passed over Chicago from the southwest about midnight. It was distinctly visible, and was noticed by everybody on the river that night. The wind was northeast when the squall touched the surface; it was on the lake, and the Hume was undoubtedly caught by it, and capsized before a move could be made. Of all the solutions of the mystery thus far offered this seems to be the most reasonable.

The "promotor" of the scheme for a line of steamers between Chicago and England is still at work figuring out the details. He has received cold comfort from marine men here. The promotor's ideas are all right and his figuring is all logical. There is nothing in the way of the success of the project, excepting the size of the St. Lawrence river canals, the completion of the routes already well established, and the capital needed for building the fleet. Otherwise the proposed line ought to pay well from the start.

The amount of advertising the lake lines are doing this season is far in excess of that in previous years. John Singleton, the Goodrich general passenger agent, has the town covered with pictures of the Virginia. In hundreds of windows are fine representations of the new steamer, expensively framed.

An innovation by the Central Traffic Association is going to do the marine much good in an educational way. Every week, with the statement of eastbound rail shipments is given the shipments by lake. It has surprised many thousands of people to learn that the lakes carry nearly twice as much freight towards the seaboard as the railroads. The fellows who have been saying for years that water transportation was a thing of the past, are astounded when they read each week what the lakes have done. If statistics were published on through business from the seaboard to Chicago, they would be simply paralyzed. The inroads the lake lines have made in westbound traffic are very serious to the railroad companies. This traffic is now the heaviest in the history of the town.

The Premier's Death will Effect Kingston Marine.

Special Correspondence to the MARINE REVIEW.

KINGSTON, Ont., June 4.—The death of Sir John Macdonald will have a serious effect upon Kingston marine, inasmuch as he was the man who opposed giving the Ogdensburg route the same privileges as the Kingston route is now enjoying; and he was the man upon whom forwarders depended for the erection of an elevator here. This was his constituency and he would not listen to any proposal that tended to injuring its trade. Some think that his death will be the means of his party being ousted

out of power and the free trade party with the United States taking its place. If this were to occur there would be reciprocity in wrecking, coasting, etc., but the probabilities are that this will not take place. It is reported here that Sir Charles Tupper, Canada's high commissioner in England, will come here and run in this constituency, and if successful succeed Sir John as premier.

Mr. Gordon, M. P., of British Columbia, is now at Ottawa, where a few days ago he gave notice in the house of commons that he would move, "That the maritime interests of Canada and other British colonies and possessions are developing in a marked degree, that in the opinion of the house the maritime interests of the United Kingdom and the colonies and dependencies thereof, would be promoted and conserved by declaring the coasts thereof for the purpose of maritime trade to be contiguous territory, and the whole and every portion thereof to be subject to uniform coasting regulations, limiting the coasting trade thereof to British and colonial vessels belonging to reciprocating nations only; that the governor general request the concurrence of Her Majesty and her other possessions, and if approved of to initiate such legislation as will give effect to the same at the earliest practicable date, and that the resolution be sent to all boards of trade in the British empire for their consideration." Of course, this motion cannot be dealt with this session of parliament. The session will adjourn and a new cabinet will have to be formed before any business can be done.

One of the Montreal Transportation Company's elevators sank at the wharf, Sunday, owing to a stop cock being carelessly left open. She will be raised at once, as the propellers Myles, Duluth and Boyce will be here in a few days with grain from Chicago.

All the timber which was stored here last winter is being hurried to the front. It is safe to say that by the end of the season there will not be a stick here for storage.

A Law Without an Object.

EDITOR MARINE REVIEW: An editorial paragraph in your issue of May 21, relating to a "load line" to be marked on seagoing vessels, intended for a correction, is not quite correct in stating that the "object of the law" is "to protect American vessels in the foreign trade." The passage of the clause referred to seems to have been accidental rather than intentional. It relates to sail vessels as well as steamers, that have been "inspected." There are no sail vessels inspected by the United States, hence the clause cannot apply to them; and we have no steam vessels running to Great Britain, so the marking of a load line could not "protect" any of them. There is no intelligent object for the new law, that is to be perceived. Besides, a load line law to protect from British discrimination, according to the British act recently put in force, must be accepted by the British board of trade as substantially as good and effective to prevent overloading as their own. The new British law superceded an old law (of 1876) that was based on the principle of every owner to mark his own load line, by any rule he pleased. Plimsoll had tried to get rules passed, but this mockery of a rule was passed by parliament in lieu thereof. It is too late now to follow the example of parliament in 1876, and pass a law to apply *no rule at all* to the extent of loading a vessel down into the water and expect the British to accept the chestnut. They have sailed past that buoy. The object of our new law remains a conundrum. A proper law with rules for loading is yet to be passed. WM. W. BATES.

Treasury Department, Bureau of Navigation,
Washington, D.C., May 28.

The MARINE REVIEW's information with regard to the object of this law was gained from the report of the committee to which it was referred when under consideration by congress. As there are no inspected sail vessels in this country, however, and as this fact has caused some criticism since the passage of the act, it would seem like a strange bit of legislation.

Largest Lake Superior Load.

The big steel steamer E. C. Pope is on her way down from Ashland carrying 2,648 gross tons of ore. With fuel added the boat has about 3,070 gross tons aboard. This is the largest cargo ever taken from Lake Superior and it is all the more wonderful when the present draught of water—only 14 feet 3 inches—is considered. The Pope is expected to carry 3,850 net tons on a draught of 16 feet 2 inches which was the draught of the Maryland when she carried 3,737 tons.

It is not generally known that the U. S. S. Michigan, that represents Uncle Sam's majesty on the lakes, figured in the Fenian raid on Canada. She caught a pontoon with 500 Fenians aboard crossing Niagara river. The Michigan took them in tow, but all were released shortly after.

Each number is worth keeping. Send 75 cents to the MARINE REVIEW for a binder that will hold 52 numbers.

C. J. Mann and the Elevator Monopoly.

Special Correspondence to the MARINE REVIEW.

BUFFALO, N. Y. June 4.—The floating elevator Cyclone, about which so much has been said of late, has a strange history. It has been unfortunate from its inception by Lyman B. Smith, of Cleveland, a few years ago, as a pneumatic apparatus for transferring grain and other bulk articles. Mr. Smith introduced a useful principle, and one that yet will be heard from. He put into the barge and its machinery all the money he could raise, and brought it here to show us how to handle grain. A few trials convinced old elevator men that the pneumatic or suction principle was possible and valuable for the purpose intended by Mr. Smith, but it had not been properly utilized to make it a success. Our elevator men had too much money invested in the old way of transferring and storing grain, to feel inclined to take hold of the new idea, and Mr. Smith had not the means to perfect his system. He tried hard to interest men of means, but failed, and the Cyclone, for which great things were promised, was sold for the benefit of creditors. The wonderful pneumatic apparatus was turned into old iron, and C. J. Mann bought the barge and rigged thereon one of the old-fashioned floating elevator towers. If things keep going on as they have been doing, the Cyclone may embarrass him as it did Mr. Smith. It's been an unlucky institution. Probably no one but Mr. Mann knows just why he built this floater when there already were more elevators, floating and storage, here than were needed. All the other elevators are in a combination called the Western Elevating Association, which has a monopoly of the lake-grain handling business. That there are objectionable features in this monopoly, no one will deny. It charges seven-eighths of one cent per bushel for transferring grain from vessel to boat, and the same rate for the transfer with ten days storage in addition. This does not look right. The state law allows a charge of only five-eighths of one cent for transferring, but so loosely is it constructed that the association can charge one-fourth cent additional for storage whether the grain passes directly through the house or not. Members of this monopoly assert that Mr. Mann constructed his floater for the purpose of compelling the association to take him in and pay him dividends as they do to the other elevators which are not in use. It is learned that an offer was made him by the association, but it was too small to suit him. So they let him go his way. Then he announced that he would transfer grain for three-eighths of one cent, or one-half cent lower than the association rate. Receivers do not like to patronize him for fear of falling out with the association, whose facilities they must have at hand. Still Mr. Mann managed to get three cargoes to transfer, but had bad luck in connection with each. His conveyer needs considerable repairing. This conveyer, by the way, was put up so that he could load a boat ahead of the floater, and thus avoid having three vessels abreast at dock. Mr. Mann now intends to moor his floater in the Erie Basin, where he can load directly into the boat, and do away with a conveyer. Only light draft vessels, however, can go into this basin. In the meantime the conveyer will be rebuilt. Mr. Mann says that he will stick to his Cyclone and make it a success. Whether he will hurt the monopoly remains to be seen.

Already quite a number of big steamers and consorts have come here light from Lake Michigan for 60-cent coal cargoes. An interesting question is, does it pay owners to engage in this one-sided traffic? The coal rate, of course, is free from all handling expense, that being borne by the shipper. Sixty cents on coal per net ton, consequently is as good as 80 cents on iron ore per gross ton from Escanaba. Owners would willingly take ore at that price just now, because the run from Escanaba is shorter than the coal run to Milwaukee or Chicago. Careful and liberal figuring makes the cost per day for wages, provisions and fuel of a 2,000-ton steamer not over \$70. Thirty dollars per day is a generous allowance for insurance, towing, oils and other necessary supplies. In round numbers, therefore, \$100 dollars per day may be taken as an ample estimate of the complete running expenses of such craft. Coming down light, the round trip to Chicago or Milwaukee with coal ought to be made in twelve days. This leaves four days for loading and unloading the coal. The freight on 2,000 tons at 60 cents is \$1,200, which would bring our big fellow around just about even. If she takes 500 tons more there would be a margin of \$300 on the right side. This computation, of course, provides for no unusual delays nor mishaps. It simply shows that there isn't much loss in carrying hard coal at present rates.

Lights and Fog-Signals Under Way.

The last congress made appropriations as follows for aids to navigation on the lakes: Light station at Carlton's island, Lake Ontario, \$8,600; range light and steam fog signal, Ashtabula harbor, Lake Erie, \$4,700; light and fog signal, Squaw island, Lake Michigan, \$25,000; light at Old Mackinaw point, \$20,000; patrol steamer for use on St. Mary's river, \$4,000; lighting St. Mary's river, 37 lights, \$30,000; range at Windmill point, (to replace Westcott's range), \$3,000; range at Fort Gratiot (to replace

Lynn's range), \$500; steam fog signal, Point Betsey, Lake Michigan, \$5,500; steam fog signal, Devil's island, Apostle group, \$5,500; range light, Fairport harbor, Lake Erie, \$400; range light, Lorain harbor, Lake Erie, \$400. All of these lights and fog signals are in the districts for which Col. William Ludlow, of Detroit, and Major L. Cooper Overman, of Cleveland, are light-house engineers. Col. Ludlow has already placed the Windmill point and Fort Gratiot ranges in operation, and the patrol steamer for St. Mary's river has been in service for some time past. Both of the government officers give assurance that the other aids will be in operation before the close of navigation. Workmen are now engaged on the light station at Devil's island, Lake Superior, and the stations for the St. Mary's river lights have been under way for some time past.

The Lake Freight Situation.

The great bulk of the season's product in ore, probably close to 4,000,000 tons, has been sold, and all the Cleveland vessel owners with a few at other ports, have taken enough of it to secure some work for their boats. In two or three instances Cleveland vessel owners have about all they can carry. The features of the week's transactions are a reduction to 90 cents in the full season rate from Ashland while the Escanaba rate for the season has been established at 65 cents. The increase in ore sales has been brought about by reduced prices. Bessemer ores are selling as low as \$1.50 a ton below last year's price, while the cut on non-Bessemer is in some cases \$1.40. The cut on non-Bessemer is, of course, most discouraging to the trade, the percentage of reduction being very much greater in the case of the cheap ore. It is understood that the Penokee and Gogebic Development Company, controlling the Colby and other big Gogebic mines, has made some sales and arranged with the American Steel Barge Company for transportation. This was about the only big concern that had not placed any portion of its product up to the opening of the present week. The block of 25,000 tons of ore taken in Buffalo a few weeks ago, and about which so much was said, has been located. It was Escanaba ore taken at 70 cents by Frank Perew, whose boats have never before been engaged in the ore trade. The contract, considering later developments and the fact that Mr. Perew's boats may be made to carry an occasional load of grain, will probably prove more remunerative than some that have since been made. While it is more than probable that more tonnage might be found to tie up at 90 cents from the head of Lake Superior for the season, if the ore was to be had, there is less inclination to accept the 65-cent rate for the season from Escanaba. There is certainly very little if any money in this rate for even the big steel carriers in a season when delays in port are certain.

Wild rates on charters made from day to day are unchanged at 90 cents from Ashland and two Harbors, 80 cents from Marquette and 55 cents from Escanaba. Considerable ore has been offering at 80 cents for single trips from Marquette during the week, and a few boats were put in for grain from the head of the lakes at 1¼ cents. There was only 2,557,545 bushels of grain in store at Duluth on Saturday last, however, as against 3,248,651 bushels at the corresponding time a year ago. Lumber freights from the head of Lake Superior show no improvement, the rates remaining at \$2 to Chicago and \$2.12½ to Buffalo. Saginaw and Bay City rates hold to the opening figures, but the lumber trade on Lake Michigan is decidedly depressed, many boats in Chicago being unable to get loads at any of the shore points.

The coal movement continues very active and cargoes of soft coal are readily found for nearly all of the upper lake ports at 50 cents to the head of Lake Superior, Marquette and Escanaba, 60 cents to Milwaukee, Chicago, Green Bay, Racine and Sheboygan, 45 cents to Lake Huron ports, 35 cents to St. Clair river ports and 27½ and 30 cents to Detroit.

Iron Mining.

VALUE OF LEADING STOCKS.

Quoted by Chas. H. Potter & Co., No. 104 Superior St.

Stocks.	Par Value.	Bid.	Asked.
Cleveland Iron Mining Company.....	\$ 25 00	\$ 15 00	\$ 16 00
Champion Iron Company.....	25 00	.....	.....
Chandler Iron Company.....	25 00	37 00	39 00
Chicago and Minnesota Ore Company.....	100 00	.....	100 00
Iron Cliffs Iron Company.....	50 00	.....	115 00
Jackson Iron Company.....	25 00	90 00	100 00
Lake Superior Iron Company.....	25 00	.....	55 00
Minnesota Iron Company.....	100 00	68 00	70 00
Pittsburg Lake Angeline Iron Co.....	25 00	.....	145 00
Republic Iron Company.....	25 00	26 50	27 50
Michigamme.....	25 00	.....	5 00

The annual meetings of the big mining companies are bringing out some statements that are somewhat encouraging, in view of the present depression. Although the statement of the Chandler mine, Vermillion range, has not been made public, it is understood to show earnings of about \$400,000 for last year, in addition to a large amount spent in opening new property, and there is said to be more ore in sight now than at any time since the opening of the mine. Dividends so long expected have not been paid for the reason that the company is carrying a great deal of ore and at the time of the meeting had made no sales for this year's delivery. It was deemed best to retain the surplus under the unfavorable conditions surrounding the market, but a dividend may be declared when a market is found for this year's product. The Lake Superior Company holds its annual meeting for the election of directors in Boston on the 24th inst. A resolution to be brought up at this meeting proposes to give the directors power to sell any portion of the land of the company which they deem unnecessary for mining purposes. There is some hope of a dividend from the Lake Superior Company.

The Metropolitan Iron and Land Company, operating the Norrie, and the Ashland company seem to be about the only Gogebic companies that have made any sales of importance, and conditions surrounding the mining business of this range have caused more anxiety than is shown in other parts of the Lake Superior district. The Penoque and Gogebic Development Company, (Wisconsin Central Syndicate), controlling the Aurora, Colby, Palms, Comet and Superior mines has been slow in placing its ore, probably on account of a disposition to hold off from the prevailing low prices, and there have been rumors on the range of a shut down or a big reduction of working forces at these mines. It is reasonable to suppose, however, that this company with the McDougall barges and other interests dependent upon it will find a market shortly for a large portion of its product, if sales have not already been made, and there will be something of a revival on the big range. The Norrie is still said to be sending out only about 4,000 tons a day, as against 6,800 tons a day at the corresponding time last season. The Germania has 25,000 tons of ore in its stock pile but is employing now only 150 men and they are being laid off gradually. The Windsor also has a stock pile of fair proportions but is working only forty men and they are engaged on development. The East and West Carey mines are working only 200 although employment might be given to 500 if the market would warrant it. These properties have a large stock pile, and are shipping one train load a day. The Sunday Lake Company has been incorporated at Milwaukee, with a capital stock of 100,000, by Ferdinand Schlesinger, Leopold Kruielsheimer and Karl Feldtkeller. Capt. L. J. Perry, of Washington, D.C., and Maj. Roberts, of Waupaca, Wis., two of the parties principally interested in the Mikado mine, have been at the mine in conference with the representatives of the fee-holders, presumably in an effort to get the property into stronger hands financially.

Were it not for the depressed condition of the market for Lake Superior iron ores and the general disposition of investors to accept only securities of the highest order it is more than probable that both the Mesaba and the Aticokan iron ranges, the former in Minnesota and the latter in the province of Ontario, near Port Arthur, would be in a position to ship ore from the head of Lake Superior before another season comes round. Plans for railways to these mineral lands are still under way however, and development later on is certain. On the Canadian side W. W. Russel and others, of Port Arthur, are seeking aid from

both the dominion and provincial governments, with fair prospects of success, and they have the assistance of the Canadian Pacific Company. The ores of this Aticokan range are said to average 67½ per cent. metallic, going as high as 71 per cent. in some instances, with but a trace of phosphorous and practically no other injurious substances. It is claimed further that the plentiful supply of this high grade ore will admit of the duty of 75 cents a ton being paid on it, or if not Canada offers a bonus of \$2 a ton on pig iron made in the dominion. At St. Paul on May 26 another railway company filed articles of incorporation. The company is to be known as the Duluth, Mesaba & Northern Railway Company and is capitalized at \$5,000,000. It is proposed to build a line from some navigable point on Lake Superior, St. Louis bay or the St. Louis river to some point on the northern boundary of the state, to be determined hereafter. Its object is to tap the iron and timber fields of the Mesaba and Vermillion iron ranges. At present the Duluth & Iron Range Railroad, a line of 120 miles long, is the only one running into that country. The incorporators are: K. D. Chase, of Fairbault; J. T. Hale, S. R. Payne and Roswell H. Palmer, of Duluth, and Alfred Merritt, C. C. Merritt, A. B. Merritt, Leonidas Merritt and N. B. Merritt, of West Duluth.

Development work on the Commonwealth find is attracting most attention on the Menominee range, the stripping being about completed. Two new shafts are being sunk with very little difficulty and grading work has begun on a spur track. The Ludington, noted for very valuable ore that sells in all seasons, is mining about 285 tons a day and this output will be largely increased when the A shaft is placed in operation shortly. Shipments to Gladstone amount to about 800 tons a day. At the Walpole mine operations are practically at a standstill, as the ore body is being lost sight of. The shaft is about 400 feet deep and for three years has been worked on a vein about 150 feet in length and varying in width. In the three years 16,000 tons was taken from the mine. Messrs. Powell Stackhouse and James McMillan, of the Cambria Iron Works, the concern which controls the mines of the Penn Iron Mining Company, spent a few days last week inspecting their properties.

Sales of the Buffalo group, Schlesinger properties on the Marquette range, are said to aggregate 100,000 tons. The Imperial mine, of this range, which shipped 27,000 tons of ore last season, will not be operated this season on account of the low prices. The ore is of a low grade but could be sold at a profit in an active market. Messrs. Pollock and Laughlin, officers of the prosperous Lake Angeline Company, were on the range last week.

Chandler, the prosperous Vermillion range mine which made such a big showing last year, is shipping an average of 1,100 a day. No. 2 shaft is being sunk from the sixth to seventh level. The third shaft is going down to the third level, the station at the second level being 16x12 feet and 50 feet long going north.

Canadians in the neighborhood of Port Arthur, the coming iron mining district of Ontario, are showing their disapproval of the government act which demands a ruinous revenue from ore at the mouth of the pit, by sending opposition members to the legislature.

The Northern Queen, bound up, collided with the Fayette Brown, bound down and stone laden, Thursday morning, near the Dummy. The Brown went down in nine fathoms after the crew was taken off. She belonged to the Bradley fleet and had a valuation of \$17,000.

Official Numbers and Tonnage.

The following official numbers were assigned lake vessels by the bureau of navigation, W. W. Bates, commissioner, for the week ending May 30: Steam—Claribel, Chicago, tonnage, gross 39.28, net 26.38, No. 126,740; Eureka, Port Huron, tonnage, gross 102.86, net 82.91, No. 136,203; Gordon Campbell, Port Huron, tonnage, gross 68.38, net 36.70, No. 86,149; H. Reed, Port Huron, tonnage, gross 53.25, net 26.63, No. 96,112; Pilgrim, Buffalo, tonnage, gross 261.13, net 209.14, No. 150,524; Sprudel, Buffalo, tonnage, gross 67.09, net 51.59, No. 116,407.

THE BEST BOOK OF REFERENCE FOR INLAND MARINE BUSINESS, AND THE BEST MARINE PAPER ONE YEAR, FOR \$2.50. WRITE TO THE "MARINE REVIEW."

MARINE REVIEW.

DEVOTED TO THE LAKE MARINE AND KINDRED INTERESTS.

JOHN M. MULROONEY, } PROPRIETORS.
F. M. BARTON, }

HOMER J. CARR, - - - Associate Editor and Manager Chicago Office,
210 South Water Street.

Published every Thursday at No. 510 Perry-Payne Building, Cleveland, O.
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The books of the United States treasury department contain the names of 3,510 vessels, measuring 1,063,063.90 tons in the lake trade. In classification of this fleet the lakes have more steamboats of 1,000 to 2,500 tons than the combined ownership of this class of vessels in all other sections of the country. The classification is as follows:

Class.	Number.	Tonnage.
Steam vessels.....	1,527	652,922.25
Sailing vessels.....	1,272	328,655.96
Canal boats.....	657	67,574.90
Barges.....	54	13,910.09
Total.....	3,510	1,063,063.90

According to the report of William W. Bates, United States commissioner of navigation, 46 per cent of the new tonnage of the country was built on the lakes during 1889. This is a percentage greater than the work of the Atlantic coast and western rivers combined, and almost equal to the whole work on the Atlantic and Pacific coast. In 1890 the tonnage built on the lakes is but very little less than that built on the Atlantic and Gulf coasts. Tonnage built on the lakes during the past five years was as follows:

	No. of boats.	Net Tonnage.
1886.....	85	20,400.54
1887.....	152	56,488.32
1888.....	222	101,102.87
1889.....	225	107,080.30
1890.....	218	108,515.00
Total.....	902	393,597.03

St. Mary's Falls and Suez canal traffic: Number of boats through St. Mary's Falls canal in 1890, 234 days of navigation, 10,557; tonnage, net registered, 8,454,435. Number of boats through Suez canal during 1890, full year, 3,389; tonnage, net registered, 6,890,014.

Annual tonnage entries and clearances of the great seaports of the world, for 1889: New York, 11,051,236 tons; all seaports in the United States, 26,983,315 tons; Liverpool, 14,175,200 tons; London, 19,245,417 tons.

Tonnage passing through Detroit river during 234 days of navigation in 1889, amounted to 36,203,606 tons. Ten million tons more than the entries and clearances of all the seaports in the United States, and three million tons more than the combined foreign and coastwise shipping of Liverpool and London.

Entered at Cleveland Post Office as Second-class Mail Matter.

THE IRON TRADE REVIEW is desirous of knowing why this journal opposes the Pittsburgh and Lake Erie ship-canal scheme while speaking favorably of the plans for a canal or ship-railway from Owen Sound to Lake Ontario. The answer is simple and is in accordance with the most forcible arguments that has been presented on the lakes against the Pittsburgh scheme. Who would not admit that the construction of a canal like the Welland between Owen Sound and Lake Ontario would be the means of building up a very large commerce, through the saving of distance around the St. Clair and Detroit rivers to the Welland before Lake Ontario is reached as at present? Such a waterway would be suited to the class of craft now engaged in Welland canal traffic and would greatly shorten the water haul to the seaboard. On the other hand, what use could be made of a waterway of Welland canal size between Lake Erie and Pittsburgh, where traffic is in coal and ore, for which the general government has wisely laid down a policy of providing a channel 20 feet deep between Duluth, Chicago and Buffalo. To provide business for this Pittsburgh canal, Mr. J. M. Goodwin, of Sharpsville, Pa., would have the ship owners of the lakes discard an experience of almost a century that has brought them to the ownership of the finest freight steamers in the world and return to the tow barges, now almost extinct in the ore and coal trade, or the canal schooner, the history of which in the same trade will soon be forgotten. Mr. Goodwin's entire report is based on this inferior class of craft, although one of the modern ore carriers will deliver in a season as much as fifteen canal schooners.

THE possibility of profit in the Lake Superior tourist business during the summer months through the building of boats with movable cabins, so that they may be used for freight purposes in the spring and fall, is discussed in the Chicago correspondence of this issue. The idea is not new by any means, as it has been so thoroughly considered as to be pronounced entirely practicable. In fact, Mr. John F. Pankhurst, of the Globe Iron Works Company, Cleveland, has been at work on plans for such a boat for some time past, with a view to the organization of a company for their construction and operation. His idea of such a boat is to combine great speed with an equivalent of strength in the hull, and to have cabins and everything above deck so constructed as to cope with bad weather. It would be necessary also to add elegance and the best of modern accommodations in order to secure the patronage desired.

THE war department seems determined to delay matters in its efforts to evade the responsibility of ordering the removal of the Canal street bridge obstruction at Chicago, although the secretary has been informed by the highest law officer in the land that such is its duty under the last river and harbor act. Capt. W. L. Marshall, the engineer officer in charge at Chicago, made a report declaring the bridge an unreasonable obstruction to navigation before an answer was received from the attorney general on the point of jurisdiction, and now the war department asks this officer for another report going over the same ground. The actions of both Gen. Casey and Assistant Secretary Grant in this matter have been very strange.

UNLIMITED wrecking privileges in Canadian and American waters on the lakes and equal rights to the transshipment of grain destined for export by way of Montreal, are matters that should demand not only the attention of those who are directly interested in these lines but of all lake vessel owners. These differences will be considered at the conference in Washington in September and the lakes should be represented.

No Light for Eleven-Foot Shoal.

Through earnest work on the part of Hon. T. E. Burton, of Cleveland, there was secured at the first session of the last congress an appropriation of \$60,000 for a light at Eleven-Foot shoal, at the entrance to Green bay, Lake Michigan, the gateway to the immense ore and coal traffic of Escanaba, Gladstone and Green bay. It was found later that this appropriation of \$60,000 was inadequate for the construction of a permanent light and an effort was made to have the money applied to the construction of light-ships but this plan failed. An effort was also made to have the appropriation increased and it was thought by some Cleveland vessel owners who are greatly interested in the Escanaba traffic that a small appropriation had been secured for the maintenance of a temporary light, pending construction. Even this latter was not obtained, however, as will be seen by the following communication, received by a Cleveland vessel owner, who had written naval Secretary Coffin, after another vessel had been aground at the shoal referred to:

SIR: Your letter of May 26, 1891, relative to the need for a light at Eleven-Foot shoal, entrance to Green bay, Lake Michigan, has been received. The Act of August 30, 1890, appropriated \$60,000 for the establishment of a light at that point, but it was found to be inadequate. The board in its last annual report recommended that congress appropriate an additional sum and that \$2,500 be provided for the maintenance of a temporary light on a light-ship near that shoal, pending the construction of the light-house. The appropriation was not made, however, and the board is now unable to place any light at that dangerous point. The board has done all in its power to obtain adequate legislation on this subject, but thus far without success. It will, however, in its next annual report, and also in its annual estimates, press the matter still further upon the consideration of congress. The board is glad to find that your attention has been drawn to this subject. Vessel owners can do much in obtaining consideration for this important subject. Public opinion often compels congressional action where it otherwise would not be had.

GEO. W. COFFIN,

Commander, U. S. N., Naval Secretary.
Office of the Light-House Board, Washington, D.C., May 28.

Around the Lakes.

Russel & Watson furnished one set of signal lamps for the U. S. S. Galveston,

Commodore G. B. Mallory, of the Minnesota Steamship Company's fleet, has taken the Masaba, last of the fleet, out of Chicago.

Lake Michigan lumber freights are very dull. In one day last week thirty schooners were tied up in Chicago unable to get loads from ports up the lake.

H. G. Trout & Co., Buffalo, recently cast two manganese bronze wheels, one 11 foot, 15 feet 3 inches pitch, and one 10 foot, 14 feet pitch, for the Plant Steamship Company's steamers Mascotte and Olivette.

Just at present owners are helpless in the hands of the hard coal shippers' fueling combination at Buffalo, but just as soon as there is a better demand for boats the "I'll fuel you too," attachment will be cut off charters.

The fast steamer Greyhound has begun her regular run between Detroit and Port Huron and is officered as follows: Captain, William McKay; engineer, George Lawrence; clerk, Fred. Whitney; steward, J. J. Dowding.

The Sandusky Coal Company, Sandusky, has just placed a red light on the end of its coal dock. This and the white light already there, will serve as beacon lights to any tug or steamer desiring to be fueled. Night telephone call is No. 318.

Miller Bros., of Chicago, are supporting the Milwaukee shipbuilders in opposing the demand of the shipcarpenters and caulkers for eight hours, but the Chicago Dry Dock Company has granted the reduction in hours and its men are at work.

It is claimed that the commander of the revenue cutter Andy Johnson was compelled to leave Chicago in great haste last week on account of an attempt on the part of union sailors to take off the crew, who were said to be working for \$27 a month.

About 300 coal handlers on the docks at Toledo quit work, Saturday, on a claim that their wages had been reduced from 11 1/2 to 10 1/2 cents a ton. They returned to work, Monday, having compromised at 11 cents with weekly payments for the future.

A. G. Menocal, of Washington, D. C., chief engineer, and H. F. Donaldson, assistant engineer of the Nicaragua canal have been at the Sault Ste. Marie examining the canal. The six locks of the Nicaragua canal will be built after the plans of the locks at the Sault.

John Hines, first mate of the schooner Sherwood, hailing from Chicago, was killed at Washburn, Saturday, by being struck by a broken tow line; and at Cleveland a sailor supposed, from papers found on him, to be Martin Wilson, of Detroit, was crushed to death under a railway train.

The schooner Verona, formerly of the Orient line, Cleveland, is again in commission. J. C. Gilchrist, of Cleveland, who bought her at auction for \$8,100 after she had been sunk at Ash-tabula, expended about \$8,000 in repairs at Buffalo. She now has an A2 rating with a valuation of \$20,000.

F. H. Durelle, Bay City, has been granted a patent on compression pipes through which oil is forced until it reaches the keel, where it is released and follows the hull to the top of the water. The chief purpose of the device is to remove barnacles, but it can also be used to distribute oil on the waves.

The facilities for unloading ore from vessels at the Niagara furnace, Tonawanda, are as good comparatively for the number of vessels going there, as any other dock on the lakes. The dock is equipped with three tramways of the Brown hoist and the dispatch given the Brazil and America has been very satisfactory to owners.

The New York & Cleveland Gas Coal Company will use Ludlow buckets in their dock at Cleveland. The O. S. Richardson Fueling Company, Chicago, wrote that cargoes loaded with the Ludlow bucket contain less than 6 tons slack to each 100 tons, while cargoes loaded with the old-style bucket always had from 10 to 12 tons slack.

The Goodrich Transportation Company has always ordered their signal lamps for their passenger steamers from New York, but the lamps for the Virginia, the flagship of the line, were ordered from McBean, Edge & Co., Buffalo. This company has orders for sixteen sets of lamps, four sets going to the American Steel Barge Company, West Superior, Wis.

Transfers of vessel property at Chicago: Charles Mears to George I. Gardner, schooner Ida, \$3,100; Walter S. Johnson to John B. Warren, schooner Sassacus, \$2,200; W. H. Deane, new harbormaster, one-fifth interest in tug W. H. Wolf to Fred. M. Blount, \$800; same to same, one-eighth interest in the tug George B. McClelland, \$150; same to same, one-fourth interest in the tug Wau Bun, \$1,500.

A prominent lumberman said recently regarding the Burton raft bill that it was pigeon-holed at Washington so deftly that the committee sent from Cleveland was astonished. He added that the lumber interests were very modest in keeping out of the way, even going so far as to send rafts through the Sault rapids instead of the lock. Imagine the delay that would result from locking rafts.

Two Canadian vessels were tied up at Oswego by the collector a few days ago for making false manifests. The province of Ontario grants a reciprocity with Americans for harbor dues and tonnage. No such arrangement exists with the province of Quebec, and some vessels from the latter province bound for American ports, are charged with having their manifests read from the province of Ontario. The Oswego collector has determined to end the practice. The penalty for false manifests is \$500.

In his bill to amend the steamboat inspection act, recently introduced in the Canadian parliament, Minister of Marine Tupper, proposes to provide that the master of a steamboat who makes a voyage before his vessel is inspected or who navigates waters that his certificate does not entitle him to enter, shall be liable to a fine of from \$50 to \$500, and that if the penalty is not paid forthwith the vessel shall be seized. Another provision of the new measure allows inspectors to examine steamboats at any time, and to order that they do not run if it appears to him that they are unsafe or unfit to carry passengers. Any steamboat run in violation of the orders of the inspector or minister shall be liable to forfeiture.

Reid's tug Sea Gull will leave Cleveland this week for Bay City, after receiving boilers at the Cleveland Ship Building Company's yard, that will increase her steam capacity 40 per cent. The tug is now equipped with steam derricks and Providence windlass. During the early part of the season she will be engaged in towing rafts from Georgian bay to the Saginaw valley, but will have pumps and 18-inch hawser aboard at all times. Ten years ago Reid towed the first sack boom raft from Lake Superior with the Mocking Bird and Gladiator. The Sea Gull was built at Mystic, Conn., and her double steeple compounds 19 1/2 by 36 and 37 by 36 were built by Delamater. She drew too much water to go through the St. Lawrence canals, but at a cost of about \$200 he boxed her stern for about 30 feet forward and with a syphon lowered and raised her at will, while over \$2,000 was spent in getting the Athabasca and Alberta through.

Grain for the Baltimore & Ohio.

Superintendent Irwin, of the Fairport docks, says that a large portion of the grain received at the new million-bushel elevator at that point is Duluth wheat. When the Baltimore & Ohio purchased the Valley road a short time ago, to be used as a lake feeder for its line from Cleveland, it was said that some of the northwestern grain designed for export from Baltimore would come this way. It is another case of increased water haul and shorter rail haul in Fairport's case, however, and if the business increases it is more than probable that the elevator capacity at Fairport will be increased instead of giving any of the business to Cleveland. The rail haul from either Cleveland or Fairport to Baltimore is said to be no greater than that from Buffalo to the seaboard, by way of the lines engaged in the business.

Cleveland Matters.

The managers of the Big Four coal docks, Cincinnati slip, have, through persistent efforts, secured a good equipment in loading machinery. They can now load a 2,000-ton boat in a day.

At this time a year ago the steamship Cambria, of the Mutual line, had made seven trips, one of them to Lake Superior, and had delivered 17,000 tons of ore. She has yet to make a single round trip this season and the other boats of the line have done little better.

In General.

It is estimated that 300,000 tons of coal has already been received at Duluth.

Chicago bridges will hereafter be closed from 6:30 until 8 o'clock in the morning, instead of from 6 o'clock until 8.

The hull of the wrecking schooner H. W. Johnson is now in the Detroit dry dock, where it is being converted into a wrecking tug.

H. Baby has purchased the Chicago excursion steamer Chief Justice Waite for \$16,000, and John Byrne has bought the Chicago excursion steamer Ivanhoe for \$20,000.

The last of the six steel steamships of the Menominee Transit Company, the Roman, will be launched at the shipyard of the Globe Iron Works Company at 2 o'clock, Tuesday.

The new Port Huron propeller Carpenter has been chartered for the season to carry hardwood lumber from Lake Huron to Grand Haven, where it will be shipped to Grand Rapids furniture factories.

Joseph E. Cook, supervising inspector of steam vessels for the Eighth district and a veteran in the service, died at his home in Detroit, Friday, in his seventieth year. Paralysis was the cause of death.

Commander Charles V. Gridley, of the Tenth light-house district, with headquarters at Buffalo, is to be detached from duty in that district on the 30th inst., to be succeeded by Commander Edwin T. Woodward.

Capt. John Martel is building for the H. W. Williams Line, of South Haven, a new steamer 100 feet long. H. Blöcker & Co., Grand Haven, will supply her with a high pressure engine 16x16, and Johnston Bros., of Ferrysburg, will build the boiler.

Laborers to the number of 100 are said to be engaged in clearing the right of way preparatory to beginning the work of excavating for the water power canal on the Canadian side of the Sault. It would seem as though the company which has undertaken this big project will at least spend a little money.

City of au Sable is the name of a lumber barge constructed at Au Sable by Joseph Rogers, of East Saginaw, from the hull of the schooner Wyoming. Thirty feet of the Wyoming's stern was cut away and 50 feet added, so that the new boat is 167 feet long. She is owned by H. M. Loud & Sons' Salt and Lumbering Company and is supplied with derricks and other machinery for the handling of timber. She has a 22x26 high pressure engine and a boiler 7x13 feet.

Major Davis, United States engineer, detailed to examine and report on matters of final importance regarding the transfer of the Portage Lake canals to the government, has finished the work. He says he has found the surveys of the property correct and will within a few days send a report to Washington, recommending also that the work of clearing out the bar at the upper canal be put through as rapidly as possible. He expresses the opinion that there is nothing more to delay the government in taking charge of the canals.

J. H. Jacobs, of the Marquette firm of Furst, Jacobs & Co., has sold to five other members of the company his one-sixth interest in the Marquette brownstone quarry and a lease of the Portage Entry redstone quarry which the concern controls. The consideration was \$100,000. Mr. Jacobs retains his vessels and his interest in the fee of the Portage Entry quarry. Mr. Jacobs owns nearly half the stock of the new Lake Superior Redstone Company, which has a valuable property at Portage Entry, adjoining the Furst-Jacobs quarry, and he will begin putting stone on the market this season.

"THE MICHIGAN"

ISSUES POLICIES ON HULLS AND CARGOES ON FAVORABLE TERMS. IT IS FOR THE INTEREST OF THE OWNERS OF THE LAKE MARINE TO BUILD UP A HOME COMPANY BY THEIR PATRONAGE.

AGENCIES AT PRINCIPAL PORTS.

The Menominee Transit Company's Boats.

The mortgage from the Menominee Transit Company for \$1,020,000, filed with the collector of customs in Cleveland, a few days ago, had little significance outside of what has already been known regarding the plans under which six steel steamships for the company have been constructed. The mortgage covered only five of the boats, as the sixth one, the steamship Roman, has not yet left the hands of the builders, and it simply indicates a carrying out of the understanding reached some time ago when the Chapin Iron Mining Company, a party to the agreement under which the boats were built on a bonded arrangement, was reorganized and released from financial embarrassment by the introduction of eastern capital.

Wrecks and Heavy Losses.

The propeller B. W. Arnold, which was on Green island reef, Georgian bay, last week was released without serious damage.

The barge Mayflower, owned by Leatham & Smith, of Sturgeon Bay, and valued at \$3,000, went down near Duluth, Tuesday, while carrying stone from Portage Entry to the head of the lake. Capt. Zeerbst was drowned.

The steamer City of Duluth was on Graham shoal, Tuesday, and the Keystone and Masten grounded at South Fox island. Grummond's tug Leviathan released the Keystone and Masten and then proceeded to Graham shoal where the Favorite joined her in releasing the City of Duluth.

The schooner Thomas Hume, owned by Hackley & Hume, of Muskegon, can be numbered among the lost vessels of the present season. She left Chicago for Muskegon on May 21 and nothing has since been heard of her although a diligent search has been made. The boat measured 199 tons, had an A2 rating and was valued at \$6,000. Henry Albrightson was her captain and she had a crew of six men all told.

Palmer & Co., of Cleveland, who handle the big wooden propeller C. H. Presley, were advised, Thursday, that the boat, loaded, was ashore on Lake Huron, between Point au Barques and Sand Beach. She was pounding some when she first went onto the beach. As her engine could not be worked on account of the shoe being bent, her captain telegraphed that he had let some water into her and she was resting easy.

Surveys at Cleveland on the propeller Raleigh and consort Camden, which were ashore on Gray's reef, showed damages amounting to \$10,259 and on the schooner amounting to \$2,595. Damages to the steamer's machinery amounted to \$4,240 and to the hull \$6,029. S. V. Parsons, of Buffalo, and Capt. D. Sullivan, of Milwaukee, were the surveyors of the Raleigh and Capt. George Quayle and W. G. Radcliffe acted in the same capacity on the Camden. The Camden is being repaired at the Ship Owners' dry dock.

The Cleveland city board of equalization requests all owners of mining stocks or property in vessels to report their holdings specifically on the assessors' blanks without fixing values on them, leaving the assessments to be made at the same rate for all. The board claims to have the means of ascertaining the value of mining shares and vessel property, and also seeks in this way to relieve vessels from sewer tax, etc.

J. C. Gilchrist's steel steamer F. W. Gilcher, recently put forth from the yard of the Cleveland Ship Building Company, loaded 3,150 tons of hard coal for Chicago at Buffalo, Wednesday, and another cargo record is broken.

Insurance Company of North America.

INCORPORATED 1794.

LAKE MARINE DEPARTMENT,

GEO. L. McCURDY, Manager, Chicago, Ills.

CHARLES PLATT, President. WILLIAM A. PLATT, Vice-President.
EUGENE L. ELLISON, 2d Vice-Pres't. GREVILLE E. FRYER, Sec'y & Treas.
JOHN H. ATWOOD, Assistant Secretary.

Capital, paid up in cash..... \$3,000,000 00
Assets..... 8,951,518.83

Affairs in Admiralty.

The case of the Vermont Central Railway Company against Parker & Millen, of Detroit, in which testimony and arguments were submitted to the referee in Buffalo last week, is on hearing before Judge Coxe in the United States circuit court, New York. The hearing before a referee was by mutual agreement, and either party may appeal from this decision to the court according to the stipulations between them. Several years ago plaintiff leased the propeller B. W. Blanchard from the defendants to run between Chicago and Ogdensburg. Some time later her boiler was found to need considerable repair. The railroad people claimed that the boiler was defective when they chartered her, and under their contract the owners ought to pay for repairs. The suit was brought to settle this point. H. D. Goulder, of Cleveland, is representing the defendant and H. C. Wisner, of Detroit, the plaintiff.

In August, 1889, the propeller F. & P. M., No. 1, on leaving her dock in Milwaukee to go out into the lake found two other propellers aground at the mouth of the pier, while the schooner Odd Fellow was moored to the pier near by. She was caused to sheer and collide with the schooner by the current created by the wheel of one of the grounded vessels, which was suddenly started. "Although neither the grounded propellers nor the tugs which were assisting them were at work when the moving vessel approached," said District Judge Jenkins in deciding the case, "still, the appearance of the water indicated that they had just stopped working and there was every reason to believe that the efforts would be presently renewed. It is held accordingly that the sudden movement of the grounded vessel should have been anticipated, and the propeller was in fault in passing so near as to be effected by it."

In a case recently heard before Judge Brown, in the district court, southern district of New York, where a mate of a vessel, working with a seaman and stevedores in discharging cargo, the captain of the vessel being absent, continued to unload the cargo in a dangerous manner, after his attention had been called to the danger and complaints had been made, and the cargo subsequently fell and injured the sailor, the vessel was held liable for the injury. "Ship owners are bound," said the court, "to provide seamen with reasonable security against dangers to life and limb by the usual means, when such dangers are brought home to the knowledge of the proper officer." Under the circumstances of this case, the mate of the vessel and the sailor were not fellow servants in respect to making safe the means of discharging the cargo.

Lake vessel masters can not be too careful about describing the voyage in shipping articles. Judge Reed, of the district

court, Pennsylvania, decided a case a short time ago in which several deck-hands had shipped on a steamboat at Cincinnati, without any agreement as to the duration of the voyage, the port of its termination or their discharge. The court held that the legal presumption in such a case is that the men are to be returned to the port of shipment. Upon their arrival at Pittsburgh they were discharged and they were accordingly all entitled, except one, whose residence was at Pittsburgh, to compensation for their time and expense in returning to Cincinnati, irrespective of the fact that Pittsburgh was the home port of the boat.

Crude Oil for Steamboat Fuel.

An interesting test has been made with crude oil as fuel on the canal steamer George W. Dimmers during a trip from Buffalo to New York. A representative of the REVIEW came across the information on a recent trip to Buffalo and it is given publicity on account of its value as news matter, the cut appearing on page 1, having been secured to further illustrate the manner of using the oil. The Dimmers left Buffalo about May 13 with three consorts, all grain laden. Two mechanical engineers of Buffalo furnished a blank, which was spaced for detailed information, to be filled out daily. This included the amount of oil used, the pressure obtained, revolutions, etc. For several days reports showed unsatisfactory results, giving but equal returns with coal. The trouble was discovered by the fireman, who found that he was using too much oil and regulated the burner accordingly. Notwithstanding the loss from inexperienced regulation, the results, compared with a trip when coal was used on the same boat with two consorts, were: Oil burned, 55 barrels as against 40 tons of coal on a former trip; 90 revolutions with oil, 70 with coal; 18 pounds vacuum with oil, 10 with coal. The time used for the trip with oil was 36 hours less than with coal, notwithstanding that an extra consort was towed when the trip was made with oil. The saving in expense was \$60. The trip has been watched with interest and crude oil is the coming fuel for use on canal boats. The difference of weight of the fuel being less than half, is of itself a recommendation on account of saving cargo space. The only objection to the use of oil on our large lake steamers is that made by insurance companies. During the summer, trials will be made on larger boats, and there is no reason why economical results will not obtain on large steamers as well as small.

A few days ago a monster ship arrived at New York from Calcutta, 310 feet long at the water line, 42½ feet beam and 24 feet 7 inches depth of hold. She is built of steel throughout, having a steel hull, steel decks, steel houses, steel masts and spars. Three of her four masts are 153 feet high, and the after, or jigger mast, is a single casting of steel, 146 feet long from heel to head, being the longest piece of steel ever put on board a ship. There are 700 yards of canvas in her mainsail alone, 600 in the cross-jack and 520 on the foresail. With all sail set, on her recent passage, she covered 308 miles in one day, which means a sustained speed of 13 miles an hour. She only carries a crew of 34 men, but below presents an immense sweep of hold, in which 5,000 tons of cargo may be stored.

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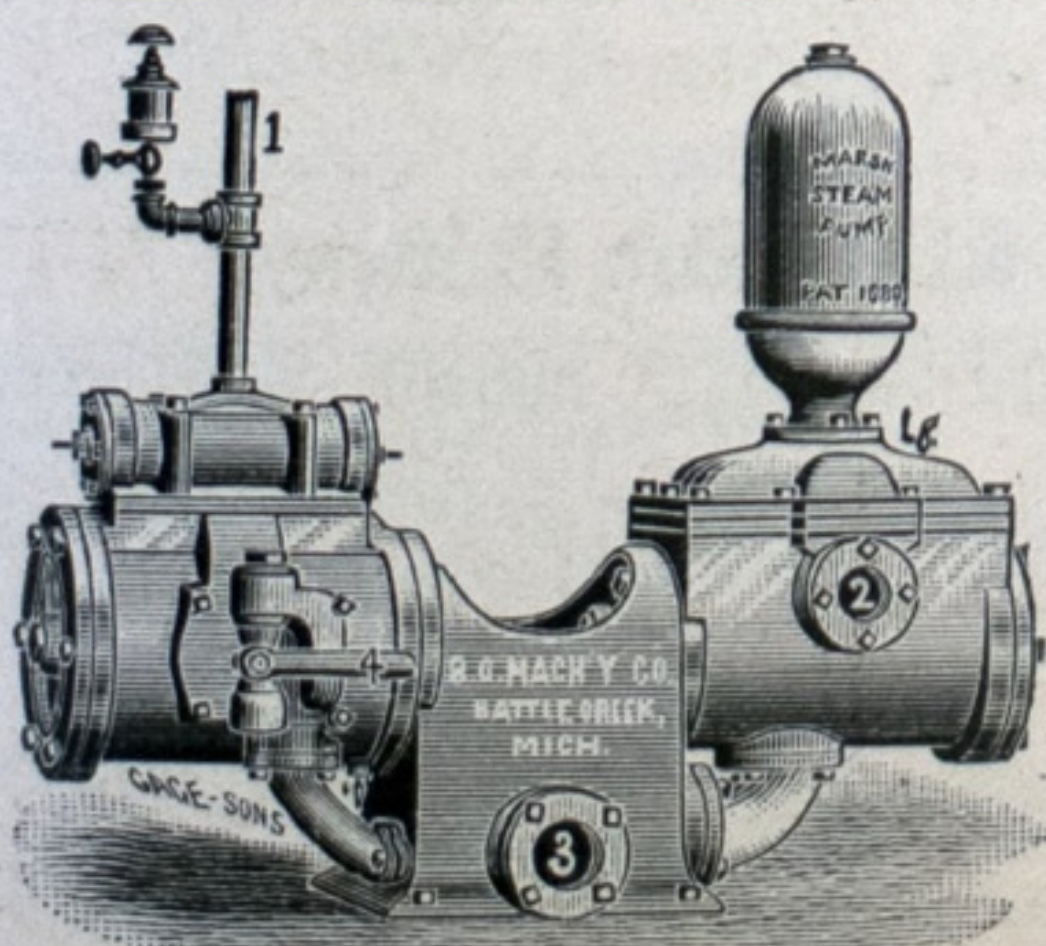
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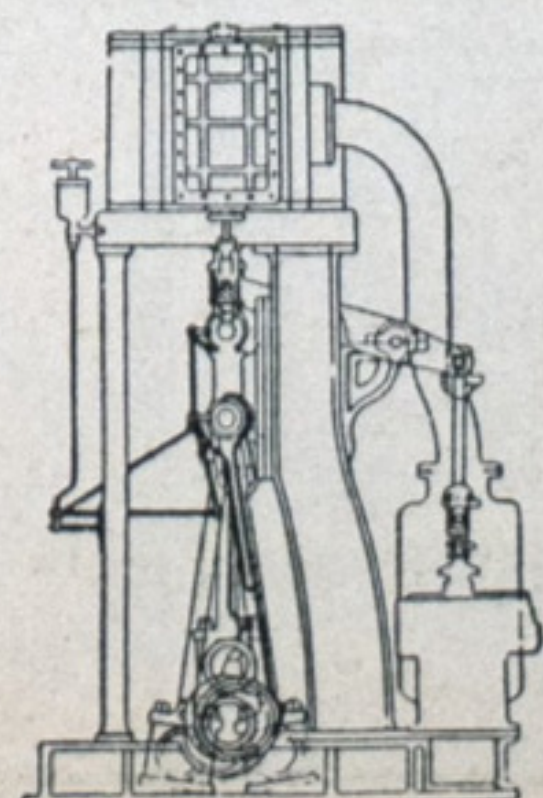
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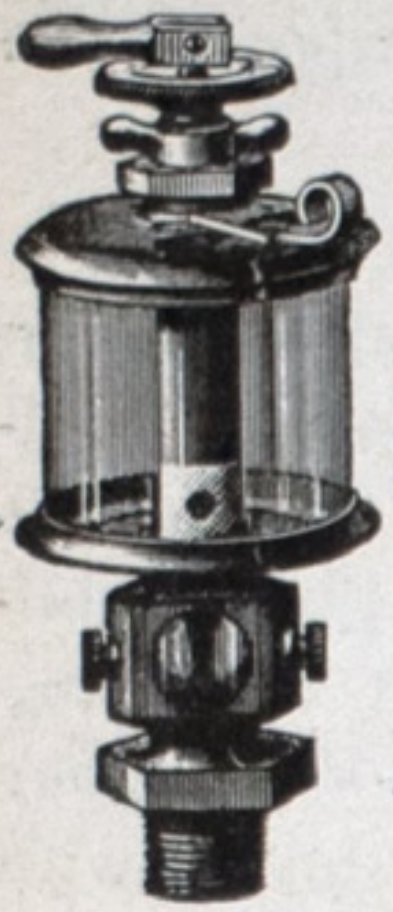
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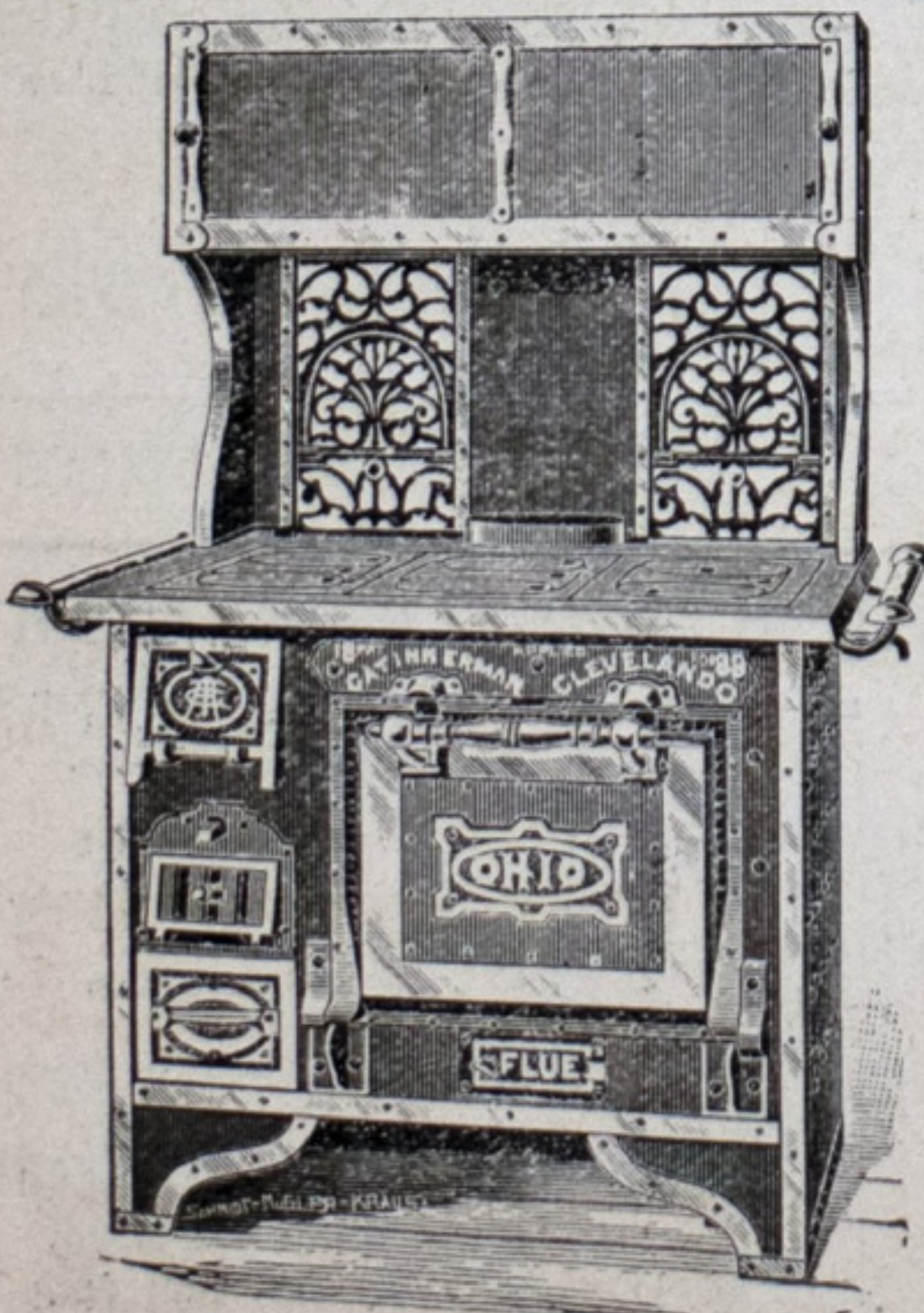
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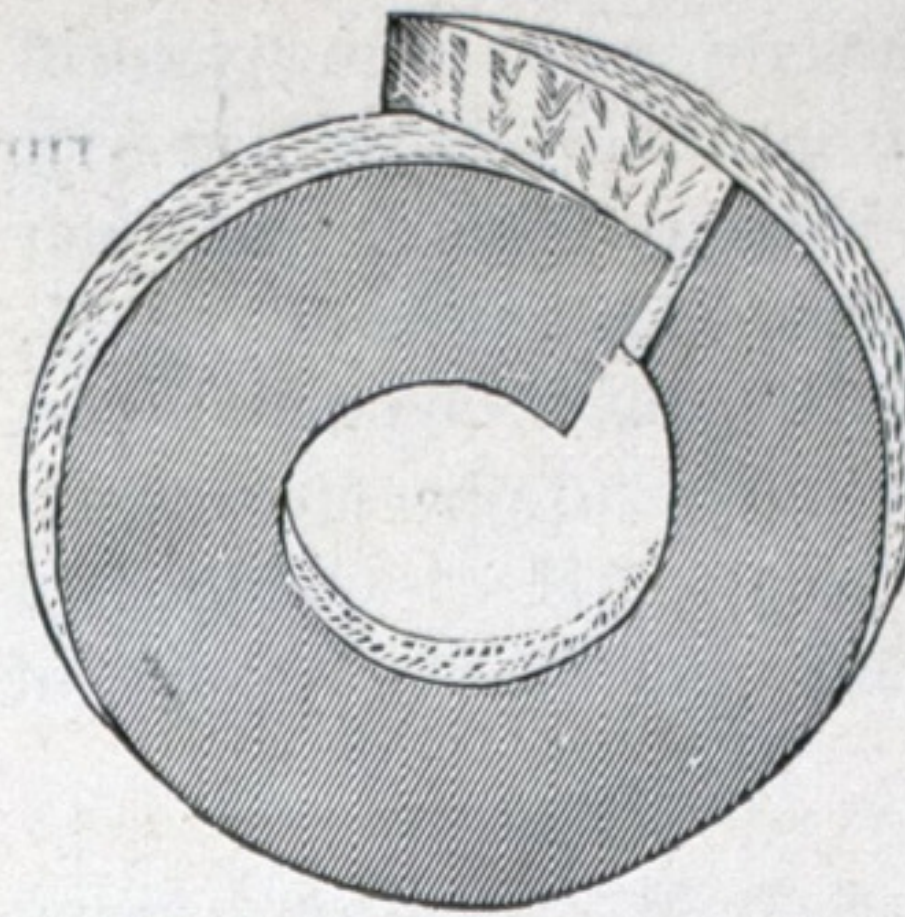
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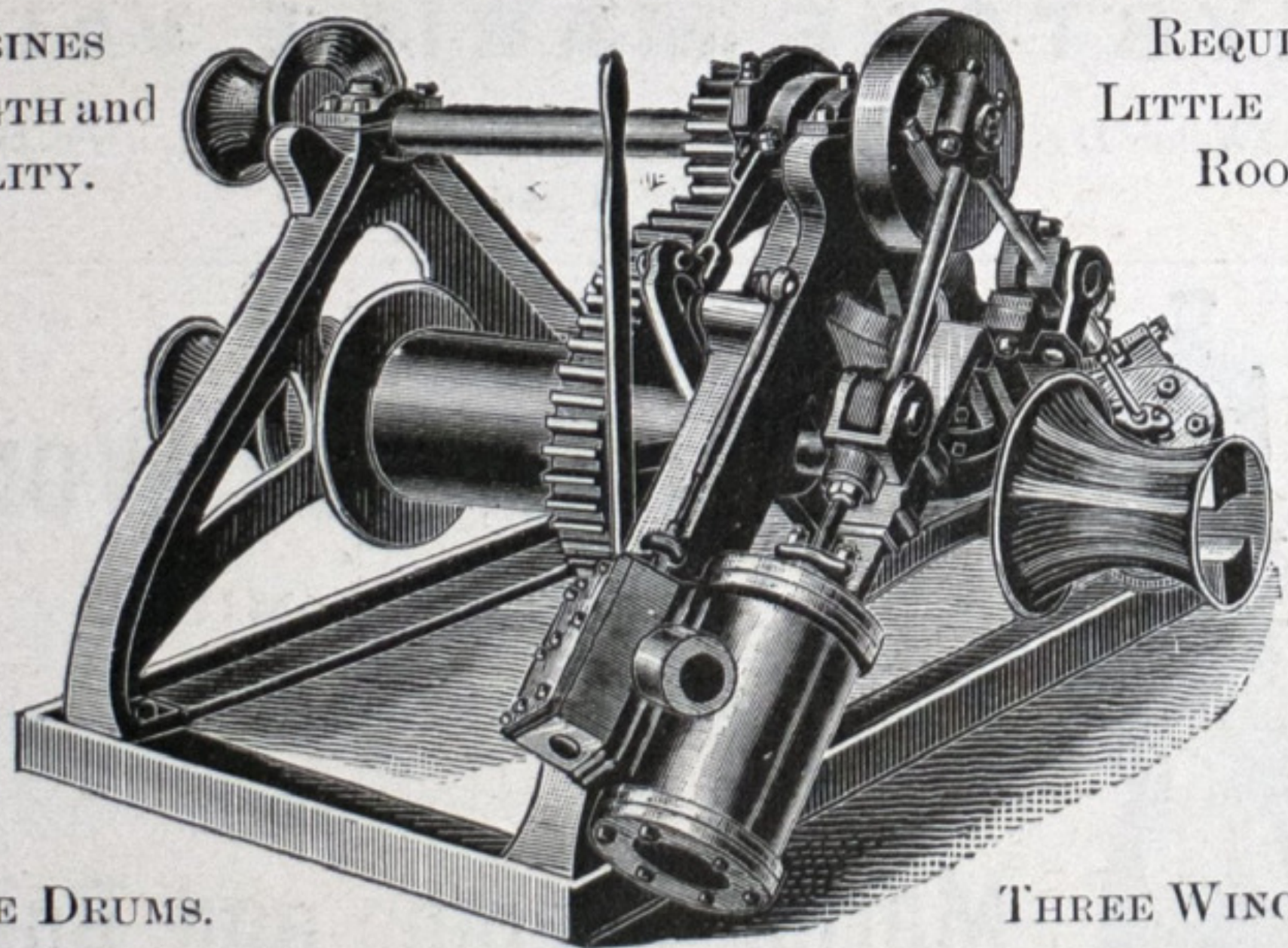
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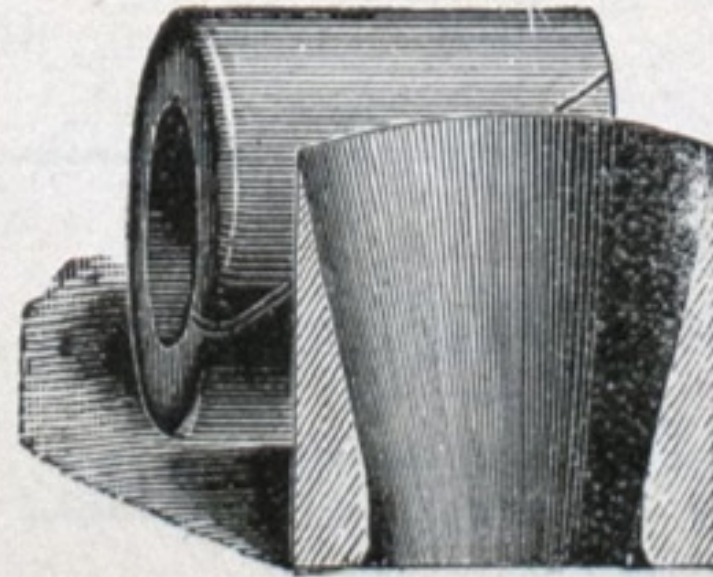
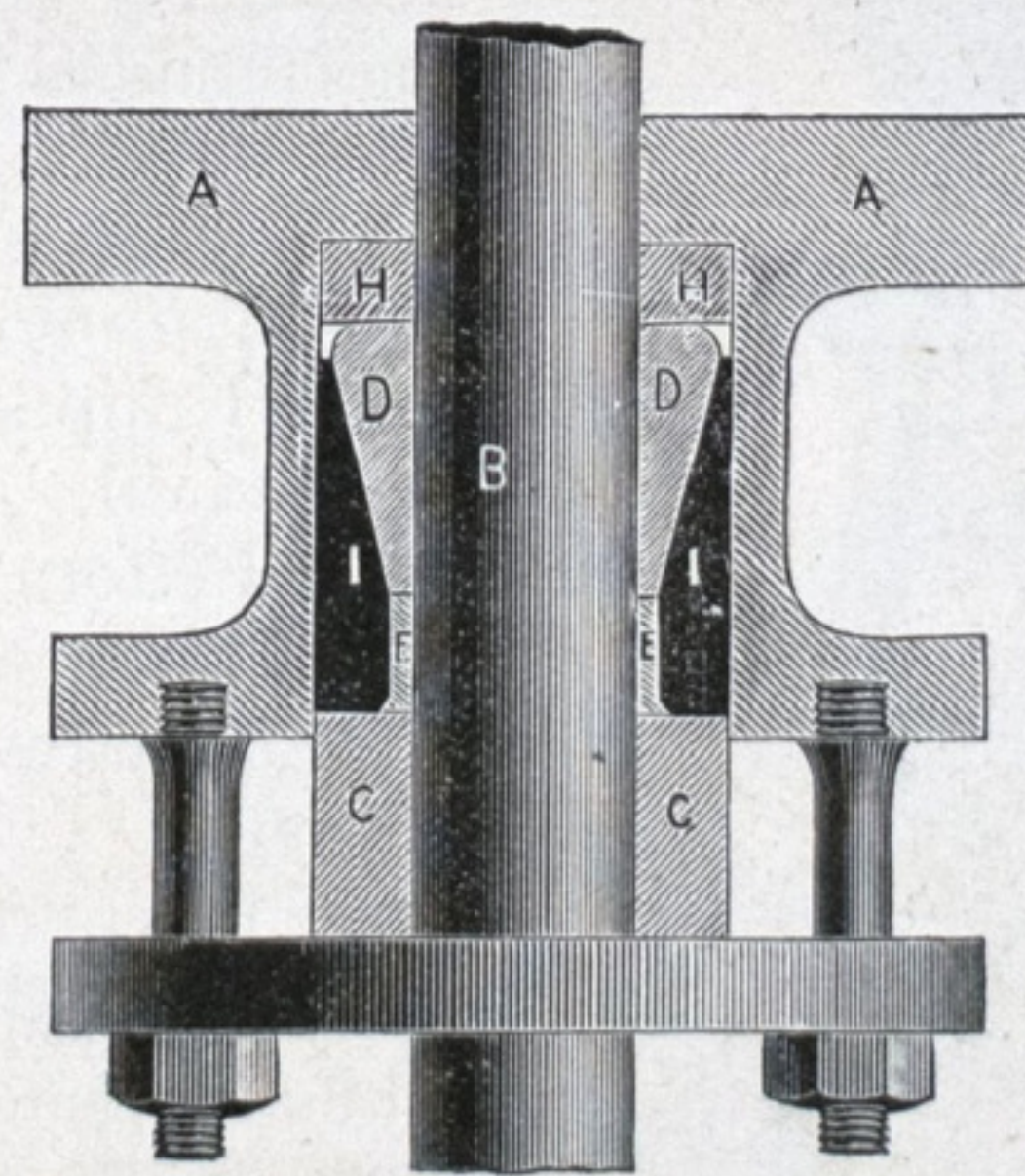
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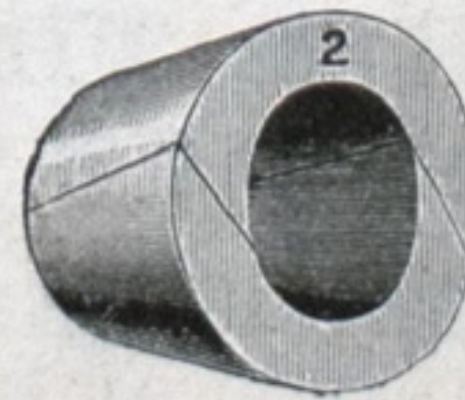
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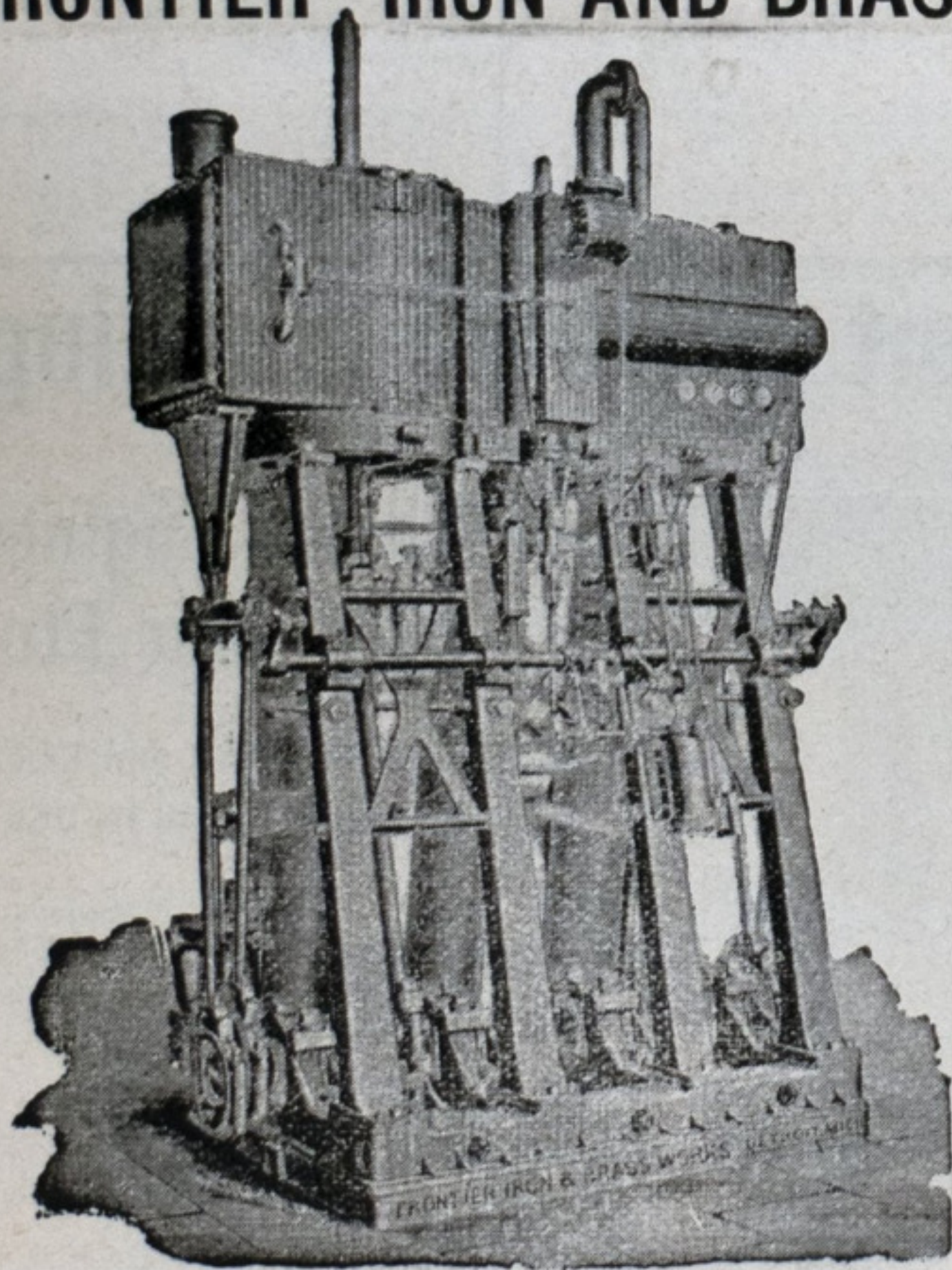
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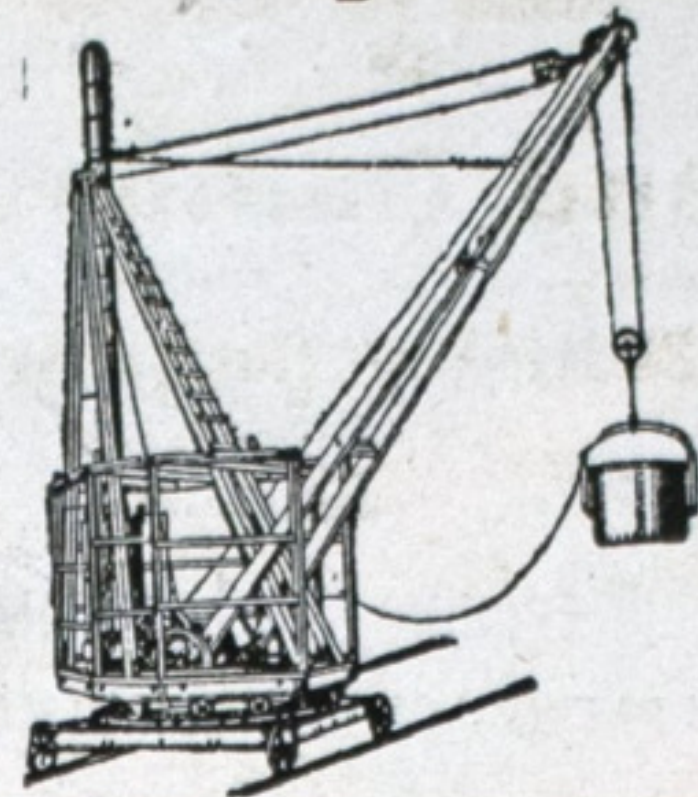
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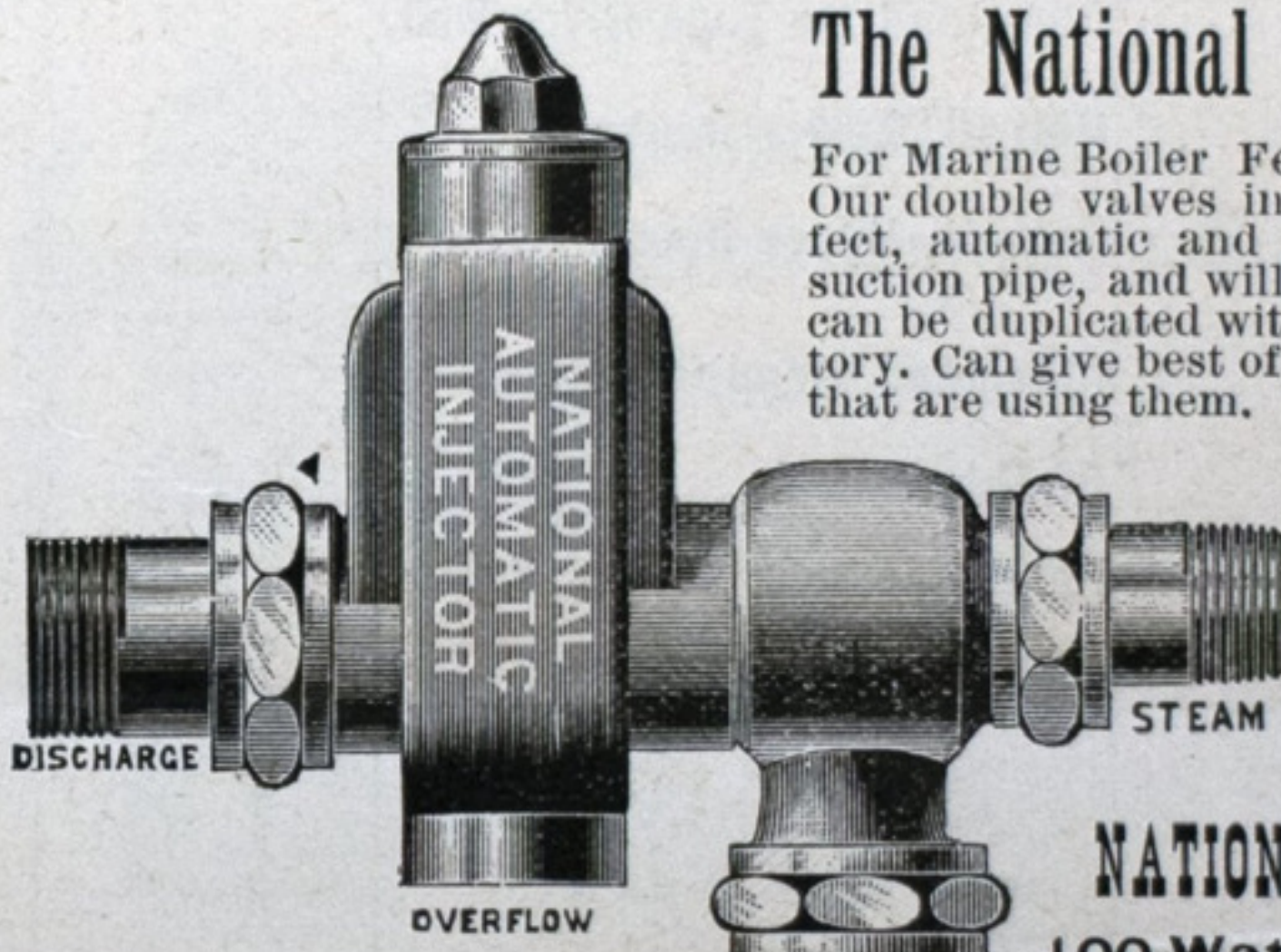
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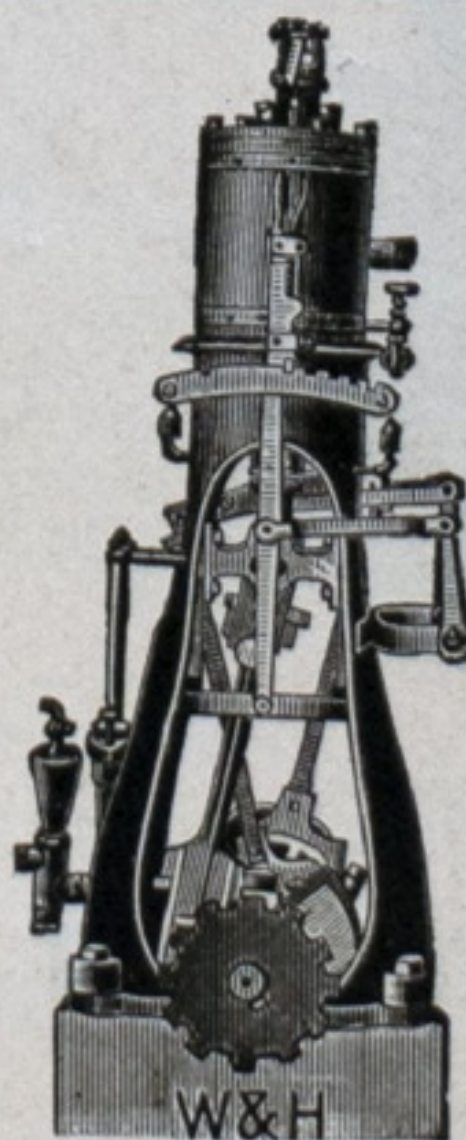
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